

11 Cardiology

Cardiac symptoms 417	Hypertension 424
Dyspnea & oedema 417	Heart failure 428
Syncope 418	Raynaud's phenomenon 430
Palpitations 420	Cholesterol and hyperlipidemia 431
Claudications 422	Rheumatic fever 432
Rest pain 423	Cardiovascular drugs 434
Fatigue 423	Put in your mind 436
Rest of the history 423	Test yourself 439

VISIT...

LANZAROTE
Caliente.COM

قال تعالى:
وَأَنْ يَسْكُتَ اللَّهُ بِضُرِّ
فَلَا كَاشِفَ لَهُ إِلَّا هُوَ
وَأَنْ يَسْكُتَ بَخِيرٍ فَيُخَوِّلَ كُلَّ شَيْءٍ قَدِيرٍ
وَهُوَ الْقَاهِرُ فَوْقَ عِبَادِهِ وَهُوَ الْحَكِيمُ الْخَبِيرُ
الأنعام ١٨

416

CARDIAC SYMPTOMS

Cardiology | Page 1

1. Chest pain (see emergency chapter) ٤٤٤

2. Breathlessness & edema:

- **Dyspnea (breathlessness):**
 - "Dyspnea" is an abnormal awareness of one's breathing (Described in details in chest chapter)
 - **Ask especially:**
 - How far can the patient walk on flat before they have to stop (march tolerance)?
 - What about **stairs** and **hills**: can they make it up a flight? صعود السل؟، تدرج تدرج أد إلى بدون ما تدرج؟
 - Are they sure that they stop due to breathlessness or is it some other reason (arthritis knees for example) ياترى مشاكل إن السبب هو التهيجان مش وجع المفاصل
- **Orthopnea: (breathlessness when lying flat)**
 - Patients will not usually volunteer this is a symptoms so ask them! أسأله عنها لأنه مش هيقولها
 - How many **pillows** does the patient sleep with? And has this changed? كم مخدة بتحتها تحتك وانت نائم؟
 - Some patients may describe **having to sleep sitting upright in a chair**.
 - If the patient sleeps with a number of pillows ask why, are they breathless when they lie down or is it for some other reason?
- **Paroxysmal nocturnal dyspnea**
 - Episodes of breathless occurring **at night**: usually d.t pulmonary oedema.
 - Usually patient reacts with surprised pleasure when you ask them about it.
 - **Ask: do they wake up in the night coughing & trying to catch their breath?**
 - **Obtain details:** how often? How badly the symptoms are disturbing the patient's sleep cycle?
 - **Cough:**
 - Pulmonary oedema may cause a cough productive of frothy white sputum.

417

Cardiology | Page 2

- This may be flecked with blood (pink) d.t ruptured bronchial vessels. But this is not usually a worrying sign.

Ankle oedema: ask:

- For how long has this been going on?
- Is it worse at any particular **time of day**? Typically cardiac oedema is **worse toward the evening** & resolved somewhat over night as the oedema redistributes itself.
- Exactly **how extensive is the swelling**? Is it confined to the feet and ankles or extended to the shin, knees, thigh, or even the buttocks, genitalia & anterior abdominal wall?
- Is there evidence of **abdominal swelling** and ascites?

Grading of breathlessness:

- Nil at rest, some on vigorous exercise.
- Nil at rest, breathless on moderate exertion.
- Mild breathlessness at rest and worse on mild exertion.
- Significant breathlessness at rest and worse on even slight exertion (the patient is often bed bound).

References
1. Oxford-examination: p 160,161.

3. Syncope

- This is a faint or swoon
- **Simple vaso-vagal faints are the commonest cause** of syncope in **young patients**
- You must determine whether there truly was about loss of consciousness and not simply feeling that the patient was about to faint (pre-syncope).
 1. Was the onset **gradual or sudden**?
 2. **How long** was the loss of consciousness?
 3. What was the patient doing at the time? (Standing, urinating, coughing)
 4. Was there any relationship to **medications**? (Anti-hypertensives, GTN spray?)

418

Cardiology | Page 3

5. When the patient came to you, were there any other symptoms remaining?
6. Was there any **tongue-biting** or urinary or faecal **incontinence**?
7. Was there any motor activity during the unconscious episodes?
8. How long did it take for the patient to feel "back" to normal?

Causes:

- | | |
|-----------------------------------|-----------------|
| 1. Non-pathological | 3. Neurological |
| • Faints | • TIA/CVA |
| • Cough/micturition syncope | • Epilepsy |
| 2. Cardiovascular | 4. Others |
| • Arrhythmia | • Hypoglycemia |
| • Valvular | |
| • Postural hypotension | |
| • Vertebro-basilar insufficiency. | |

Diagnosis

History ask about:

1. **Preceding symptoms:**
 - Palpitations (arrhythmia)
 - Aura (epilepsy)
 - Emotional stress (faint)
 - Cough and micturition (syncope), chest pain (ischemia)
 2. **Witnessed account:**
 - Tonic/clonic
 - Tongue biting
 - Asymmetrical weakness
 - Urinary incontinence (epilepsy)
 - Post-ictal drowsiness
 3. **Drug history:**
 - Diuretics, nitrates, tricyclics, anti-hypertensives, sedatives, hypnotics, neuro-epileptics
 4. **Family history of sudden death:** cardiomyopathy.
- **Examination** look for :
- **Cardiovascular :**
 - Pulse (irregular)
 - BP (postural drop)
 - Heart sounds (aortic stenosis)
 - Carotids (bruit)

419

- Extended neck (causes faintness in vestibulo-basilar insufficiency)
- Check for residual CVA/TIA deficit.

Investigations

- CBC
- CA&Es (if on digoxin/diuretics)
- Bl glucose
- ECG

Management

- Postural hypotension:**
 - Advise the patient to rise slowly
 - Surgical stockings
 - Change responsible drug if possible
- Vertebro-basilar insufficiency**
 - Explain the symptoms
 - Advise the patient to avoid sudden neck movements
- Hypoglycemia**
 - If known diabetic: glucose orally or iv (50 ml of 50% solution)
 - May need to adjust daily insulin dose.
- Refer**
 - TIA
 - Arrhythmia
 - Valvular ht. dse.
 - New or poorly controlled epilepsy
 - Unexplained loss of consciousness (to either cardiologist or neurologist)

References
I.G.P. 163,164,165

4. Palpitations

- They are the sensation of feeling one's own heart beat.
- You should spend some time searching what exactly the patient mean.
- Patient may describe the heart "**jumping**" or "**missing a beat**"
- Attempt to determine:**
 - When** did the sensation start and stop?
 - Did it come on **suddenly or gradually**?
 - Was the heart beat felt as fast, slow or other pattern?

420

- Did the patient **blackout**? If so, for how long?
- Was it **irregular or regular**?

It is useful to ask the patient to tap out what they felt on their knees or a nearby table. عليه يخط شئها على الطاولة

- What was the patient doing when the palpitations started?
- Is there any **relationship to eating or drinking** (particularly tea, coffee, wine, chocolate)?
- Could it have been **precipitated or terminated by any medication**?
- Has this ever **happened before**? If so, what were the circumstances?
- Any **associated symptoms**? (Chest pain, shortness of breath, syncope, nausea, dizziness)
- Did the patient have to stop his activities or lie down?
- Was the patient able to stop palpitations somewhat? (Often people **discover they can stop their palpitations with a vagal maneuver such as Valsalva maneuver, a cough, or swallow**).

13. Some findings:

Irregular fast palpitations	Are likely to be paroxysmal, AF, or atrial flutter with variable block.
Regular fast palpitations	May reflect paroxysmal SVT or VT.
Dropped or missed beat	Related to rest, recumbency, or eating are likely to be atrial or ventricular ectopics.
Regular bounding	May be due to anxiety.
Slow palpitations	Are likely to be due to drugs such as β -blockers or due to bigeminy.

- Anxious people may be aware of their own heart beats at night.
- Reassurance is vital and can often be therapeutic.

Normal causes:

1. Fed awareness of normal heart beat.
2. Tachycardia: anxiety feedback loop.
3. Ventricular ectopics.

421

Examinations:

- Anaemia
- Pulse: BP
- Thyroidic
- Apex: radial delay (atrial fibrillation)
- ECG: (routine, during the attack)

Treatment:

1. Non pathological arrhythmias: reassure (backed up by ECG)
2. Pathological: refer

5. Claudications

- It is used to describe **muscle pain that occurs during exercise** (walking) & relieved by rest.
- Due to **peripheral ischemia**, think of atheromatous disease.
- In true claudications the patient describes the pain thus **feels like a tight "cramp" in the muscle**.
- Usually occurs in the **calf, thigh, buttock, foot**.
- Appears **only on exercise**
- Disappears at rest.
- May also be associated with numbness or "**pins and needles**" on the skin of the foot (blood is diverted from the skin to the ischemic muscle).
- Examination:** this may be normal but:
 - Look for cold feet, no hair on legs, dry or flaky skin.
 - Check BP and peripheral pulses.
 - Check the feet for corns. Fungal infections, badly cut nails.
 - Determine the "**claudication distance**": how far the patient is able to walk before the pain starts.

Investigations:

- as for general atheromatous disease
- Cholesterol
- Fasting blood glucose
- ECG

Management

1. Consider **aspirin and statin**
2. General life style advice (see in MI)
3. Ask the patient to report early signs of damage of the feet e.g. blisters

422

4. Referral: if general advice fails to help, refer to vascular surgical outpatients for angiography to assess the arterial supply to the legs.

Risk factors of claudication

1. Smoking
2. HTN
3. DM
4. Established atherosclerotic disease

6. Rest pain

- A similar pain to claudication but comes on rest and is usually continuous (**a sign of severe ischemia**)
- The patient may describe:
 - Continuous severe pain in the calf, thigh, buttocks, or foot.
 - "Aching" in nature
- Lasts through the day and night.
- Exacerbations of **pain may wake the patient from sleep**.
- The patient may find slight relief by hanging the leg off the bed.

7. Fatigue

- A difficult symptom to determine as you will find that most patients will claim to be tired than normal if asked.
- However, this pathological fatigue is caused by $\downarrow$ cardiac output and $\downarrow$ blood supply to muscles and needs to be taken seriously.
- Determine:**
 - Is the patient able to do less than they were previously?
 - Is any $\downarrow$ in activity due to fatigue or some other symptom (e.g. breathlessness)?
 - What activities has the patient had to give up due to fatigue?
 - What are they able to do before they become too tired?

8. Rest of the history

- Ask about
- The patient's **appearance**: collapsed, pale or grey, breathless and sweaty all suggest serious pathology

423

Risk factors for MI and dissecting aneurysm:

- Male
- Age > 50 years
- South Asian/Afro-Caribbean race
- Smoking
- Obesity
- HTN
- DM

- Hyperlipidaemia Surgery
- Trauma
- Risk factors for PE
- Combined pills
- Smoking
- History of thrombosis
- Recent DVT

References

- GP: P 154, 155, 156
- OHCN: P 772
- Oxford-emergency: P 68
- Oxford-examination: P 158, 159

CARDIAC PROBLEMS

1. Hypertension D4T

- On measuring BP for the first time **if you found:**

1. BP < 140/90

2. BP > 160/100

3. If BP () 140/90 and 160/100

No ttt, no follow up (<130/80 in diabetics) BP > 160/100

Repeat 4 or more readings over 2 weeks → if still high → treat. If BP () 140/90 and 160/100

Repeat reading 4 times over 3-6 weeks

- Diastolic BP > 120 & rising on subsequent readings suggests malignant HTN → **urgent refer & hospital admission.**

Results after the 4th reading

- If any DBP < 90 & SBP < 140 (<130/80 in diabetics) → no treatment is needed.
- If BP is still in the range (140-160/90-100)

Search for risk factors:

- CHD
- TOD (target organ damage)
- Renal failure, retinopathy, MI, angina, stroke, peripheral vascular disease → Present → Treat
- No TOD → No ttt & check BP & reassess CHD annually.

Causes of HTN:

- 1ry (essential): 95%
- 2ry:

- Renal dse
- Cushing, steroids
- Hyperparathyroidism
- Coarctation of the aorta
- Pregnancy
- Pheochromocytoma

Initial investigations:

- Creatinine, urine protein
- Examine for pheochromocytoma, AAA.
- ECG: search for LV hypertrophy
- CBC
- Fasting plasma glucose
- Renal bruit, Renal US, absent leg pulses

Management:

1. Modify life style

- Stop smoking
- Reduce weight
- Consume 5 portions of fruit or vegetables daily
- Reduce dietary fats
- Encourage exercise: recommend at least 20 min. of brisk exercise 3 times/week
- Encourage stress reduction.

2. Prescribing

1. If ≥ 55ys.

CCBs are the 1st choice or thiazides.

Trade names:

- CCB: R/Alkapress (5,10), Norvasc (Amlodipine) R/Epilat (Nifedipine 10mg) 1x1
- Thiazides: R/Natrilix, Natrilix SR 1x1

If 2nd drug is needed
Add ACEi
Trade names:
R/Capoten 25, 50 (Captopril)
R/Ezapril, Enalapril (Enalapril 5,10mg)

2. If < 55ys:

1st choice drug is ACEi or ARB

Trade names:

- R/Capoten - R/Ezapril
- R/Diovan 100 (Valsartan) R/Tareg 40, 80, 160, 320 (Valsartan)

If 2nd drug is needed:

Use CCB or thiazides

Trade names:

- R/Norvasc or R/Natrilix

3. If 3rd drug is needed try CCBs, thiazides, ACEi

- R/Alkapress (5, 10), Norvasc (Amlodipine) R/Epilat (Nifedipine 10mg) 1x1
Or R/Natrilix, Natrilix SR 1x1
Or R/Capoten 25, 50 (Captopril) R/Ezapril, Enalapril (Enalapril 5,10mg)

4. If 4th drug is needed: higher dose of thiazides or new diuretic: spironolactone (monitor U&E)

- R/Aldactone 25,100 - R/Aldactazide (spironolactone + hydrochlorothiazide)
Or β B: R/Tenormin 50,100 - R/Concor 2.5, 5, 10
Or Selective α blocker: R/Minipress 1, 2

5. β Bs are not the 1st line for HTN but consider in young people, $\ominus$ in child bearing potential, CI to ACEi, ARB or intolerance.

- If you initiated β Bs & a 2nd drug is needed, use CCBs **NOT** thiazides to avoid developing DM.

6. Start aspirin 75mg/day in patients > 50 years old with blood pressure control.

R/Aspicid 75mg 1x1

7. Start a statin (Simvastatin 40mg) in patients under 80 years old when serum cholesterol > 3.5 mmol/L or there is established CVD

R/Zocor 40mg at night

N.B. most drugs take 4-8 weeks to gain maximum effect, don't assess efficacy with just one BP.

3. Antihypertensive Combinations

A. Diuretics

- Spironolactone 25 + Hydrochlorothiazide 25 R/Aldactazide R/Spirozide

- Amloride 5mg + hydrochlorothiazide 50 R/Moduretic

B. Containing CCBs:

- Verapamil SR 180mg + Trandolapril 2mg R/Tarka SR
- Felodipine 5mg + Metoprolol 50mg R/Logimax

C. Containing ACEIs

- Captopril 50mg + hydrochlorothiazide 25mg R/Lapozide
- Fosinopril 10mg + hydrochlorothiazide 12.5mg R/Monozide

D. Containing ARBs

- Valsartan 160mg + hydrochlorothiazide R/Co-Diovan 160

E. Containing β Bs

- Bisoprolol 5, 10 + hydrochlorothiazide 12.5mg R/Concor plus 5, 10

8. Your target is:

- BP of < 140/85 (130/80 in diabetics) but < 150/90 is acceptable
- Once control is achieved, check BP every 6 months & Annual urine & analysis for protein, CEs, FBS

9. Stopping anti-hypertensives

- If BP is constantly < 130/80 & there is no evidence of TOD
- Withdraw gradually

N.B1: never use sublingual Nifedipine (Epilat) → rapid drop of BP → stroke risk

N.B2: resistant HTN = persistent increase of BP in hypertensive patient taking > or = 3 drugs provided that diuretics are one of them.

References

1. G.P. 149, 150, 151
2. OHCM 124, 125, 126

2. Heart failure *54R*

Cardiac output and PB are inadequate for the body requirements.

Def:

Cardiac output and PB are inadequate for the body requirements.

Symptoms

A) LVF

1. Dyspnea
2. Poor exercise tolerance, fatigue
3. Orthopnea, paroxysmal nocturnal dyspnea
4. Nocturnal cough (+ or - pink frothy sputum)

5. Wheeze (cardiac asthma)
6. Nocturia
7. Cold peripheries
8. Weight loss, muscle wasting

B) RVF

1. Peripheral oedema (up to thighs, sacrum, abdominal wall)
2. Abdominal distension (ascites)
3. Nausea, Anorexia, facial engorgement.

4. Pulsations in the neck and face tricuspid regurgitation.
5. Epistaxis
6. May be depressed

Signs

1. Looks ill & exhausted
2. Cold peripheries and peripheral cyanosis
3. Pulse: resting tachycardia and pulsus alternans
4. SBP < 90, narrow pulse pressure, JVP
5. Pericardium: displaced apex (LV dilatation) RV heave (PHTN)
6. Murmurs of mitral or aortic valve disease.
7. Chest: basal crepitations, wheeze, tachycardia, pleural effusion.
8. Abdomen: hepatomegaly, ascites, peripheral oedema.

Investigations

1. CXR: ABCDE

- Cardiomegaly
- Dilated prominent upper lobe vessels
- Pleural effusion
- Alveolar oedema "bat's wing"
- Kerley B lines (interstitial oedema)

428

2. ECG: may indicate the cause

Look for evidence of ischemia, MI, or ventricular hypertrophy.

3. Echo: cardiography is the key investigation

Management of chronic heart failure (by specialist)

(See emergency chapter for acute HF)

1. Treat the cause (e.g. arrhythmias, valvular dse)
2. Avoid exacerbating factors e.g. NSAIDs (cause fluid retention) and verapamil (negative inotrope)
3. Stop smoking, eat less salt, and maintain optimal wt and nutrition.

4. Drugs (in brief)

A. Diuretics

- Loop diuretics to relieve symptoms:

Furosemide 40mg/24 hrs PO, ↑ the dose as necessary
R/Lasix 40

B. ACEIs: consider in all patients with LVF

- Lisinopril 10mg/day, 2.5mg in the elderly
R/Zestril 10 1x1

- Alternative: ARBs if cough is a problem

Candesartan 4mg/day. Max. 32mg PO
R/Candesar 4, 8
R/Atacand 8, 16

C. β-Blockers

- Should be initiated after diuretics and ACEIs "Start low and go slow"

- Carvediol 3.125mg bd up to 25-50mg bd
- Wait ≥ 2 weeks before each dose increment
R/Dilatrend 6.25, 25
R/Carvipress 1.25

429

D. Spironolactone 25mg/24hrs PO

R/Aldactone 25

E. Digoxin

- Use if diuretics, ACEIs, and β-blockers don't control symptoms or in patient with AF
- Dose: 0.125 - 0.25mg/24hrs PO
R/Lanoxin 0.25 tab (amp. 0.5mg-Elixir 0.25mg)

F. Vasodilators

- The combination of hydralazine (SE: drug induced lupus) + Isosorbide dinitrate should be used in patients intolerant of an ACEi or ARB as it reduces mortality

3. Raynaud's phenomenon *54R*

- Characterised by cold, blue fingers after exposure to cold.
- It can be caused by vibration e.g. driving & can also affect the toes.

- It is due to vasospasm.

Management

1. Reassure the patient it is not dangerous
2. Encourage the patient to stop smoking
3. Advise keeping the hands warm, using gloves if necessary
4. Nifedipine 10mg/8hr. can be used if the symptoms are severe. Increase to 20mg/8hr. if there is no response after 1 week
R/Epilat 10mg 1x3

5. Surgery: Sympathectomy may help severe disease

6. Treat any underlying disease which may be associated e.g. peripheral vascular disease.

Tip: consider other CT disorders eg scleroderma, systemic sclerosis

References

1. OHCM: P700
2. G.P. P 163

430

4. Cholesterol and hyperlipidaemia *D4T*

Diagnosis

Test serum cholesterol if:

1. The patient is at high risk of CHD
 - Hypertensive
 - Diabetic
 - Has established atheromatous disease (Angina, MI, CVA, TIA)
 - Smoking + obesity + lack of exercise
 - FHx of heart disease
2. Family hx of hyperlipidaemia
3. Patient request

Interpreting results

- Measurement of both total cholesterol HDL cholesterol should be made.
- Very high serum cholesterol (say, >10) suggests a familial hyperlipidaemia.

Serum cholesterol is elevated in:

- DM
- Nephritic syndrome
- Hypothyroidism
- Pregnancy

Management

1. Dietary advice: & life style advice

- Aim for BMI < 25 for men & < 23 for women

$$\text{BMI} = \frac{\text{wt (kg)}}{\text{height}^2 \text{ (m)}}$$

- ↑ exercise
- ↑ fiber, ↑ fresh fruit & vegetables, omega 3 fatty acids
R/Omega 3 plus 1x1

- تجنب الأطعمة الغنية بالدهون والكوليسترول مثل صفار البيض والسمن واستعمال زيت البذر
- الإقلاع عن التدخين
- تقليل الوزن
- ممارسة الرياضة مثل المشي

2. Statin (e.g. Simvastatin)

R/Zocor 40mg 1x1

431

- **Typical dose:** 500µg start po, repeated after 12 hr then 12.5mg (if elderly) to 375mg / day po.
- **IV dose:** 0.75 – 1mg in 0.9% Na Cl over 2hr.
- **Toxicity:** risk ↑ if K^+ , Mg^{2+} , or Ca^{2+} ↑
- If on amiodarone, halve the doses of digoxin.
- **Trade names:**
R/Lanoxin amp (6.5mg / amp)
R/Lanoxin 0.25mg
- **SE:** Any arrhythmia (supra-ventricular tachycardia with AV block is suggestive), nausea, ↓ appetite, yellow vision, gynecomastia.
- **In toxicity:** Stop digoxin, check K^+ , and treat arrhythmia.

References

1. OHCM: P100

Put in your mind

1. Life threatening causes of chest pain:

- Acute myocardial / infarction (MI).
- Angina / Acute coronary syndrome.
- Aortic dissection.
- Tension pneumothorax.
- Pulmonary embolism.
- Oesophageal rupture.

2. Angina pain

- Crushing, heaviness or a tight band.
- Retrosternal.
- Worse with physical or emotional exertion, cold weather and after eating.
- The patient usually describes the pain as "discomfort".
- Relieved by rest and nitrate spray (within 2 minutes).
- Not affected by respiration or movement.
- Sometimes associated with breathlessness.
- Patients classically clench their RT fist and hold it to their chest when describing the pain.

3. Pain of MI:

- Similar to that of angina but much more severe, persistent (despite nitrate spray) and associated with nausea, vomiting and sweating.
- Dissecting aortic aneurysm must be differentiated from MI as thrombolysis here is fatal.

5. Pain of dissecting aortic aneurysm

- Severe tearing pain.
- Radiating posteriorly, classically between the shoulder blades.
- Persistent, most severe at onset.
- Patient is usually hypertensive.
- Chest tenderness may be a feature of PE.
- Angina is pain due to myocardial ischemia.
- In angina: ECG is usually normal but may show ST depression, flat or inverted T waves, signs of post MI.
- Acute coronary syndrome ACS includes:
 - Unstable Angina.
 - Non ST segment elevation MI.
 - ST segment elevation MI (Acute MI).
- Silent MI: MI without pain: 1/3 of cases.
- In MI: give metoprolamide IV not IM (Risk of bleeding with thrombolysis).
- Dose of streptokinase is 1.5 million units in 100ml 0.9% saline IVI over 1hr.
- Dyspnea is an abnormal awareness of one's breathing.
- Orthopnea is breathlessness when lying flat.
- Diastolic BP > 120 mmHg & rising on subsequent readings suggests malignant HTN → urgent refer & hospital admission.
- In treatment of HTN: if you initiated βBs & a 2nd drug is needed use CCBs not thiazides to avoid developing DM.
- βBs are not the 1st line for HTN but consider in younger ♀ in child bearing period.
- Most of ant HTN drugs take 4 - 8 weeks to gain maximum effects, don't assess efficacy with just one BP.
- In tit of HTN: your target is BP of < 140/85 (< 130/80 in diabetics) but BP < 150/90 is acceptable.
- Never use sublingual Nifedipine (Epilat) to reduce BP → Rapid drop of BP → stroke risk.
- Resistant HTN = persistent increase of BP in hypertensive patient taking ≥ 3 drugs provided that diuretics are one of them.
- Palpitations are the sensation of feeling of one's own heart beat.
- Palpitations may be terminated by a vagal maneuver such as: Valsalva's maneuver, a cough or swallow.
- Anxious people may be aware of their own heart beats at night.
- Claudications: the patient feels like a cramp in his Ms, usually in the calf, buttocks & foot - appear only on exercise.
- DVT is most common in patients over 40yrs old who undergo major surgery.

27. DVT is characterized by: leg pain with swelling, warmth, tenderness and dilated superficial veins.
28. PE is characterized by: Acute dyspnea, pleuritic chest pain, haemoptysis, and syncope.
- Tachypnea, tachycardia, hypotension, cyanosis.
29. Classically PE Presents 10 days post-op. with collapse and sudden breathlessness while straining a stool. But PE may occur at any period of immobility or with no predisposing factors.
30. In PE: ECG may show RV strain $V1, V2, V3, V4, V5, V6$
- Deep S in lead I
 - Q waves in lead III
 - Inverted T in III
31. In PE: you must be very fast as most deaths occur within 1hr.
32. Massive PE: is PE resulting in haemodynamic compromise or where > 30% of pulmonary vasculature is compromised.
33. Heart failure is defined as: cardiac output and BP are inadequate for the body's requirements.
34. Echo is the key investigation for HF.
35. In acute HF begin tit before investigations.
36. Asthma / COPD, pneumonia and pulmonary Oedema are Often hard to distinguish especially in the elderly where that may co exist, don't hesitate to treat all simulate area sly (e.g. with salbutamol, nebulizer, frusemide IV, diamorphine, amoxicillin).
37. Raynaud's phenomenon is ch' by cold, blue fingers after exposure to cold & can be exacerbated by vibration e.g. driving & canal so affect the toes.
38. High cholesterol is a major risk factor for coronary heart disease.
39. $BMI = \frac{wt (kg)}{Height^2 (m)}$
40. Total cholesterol > 10mmol/L: refer.
41. Rheumatic fever: common 5-15 ys.
42. Pharyngeal infection with group A β haemolytic strept triggers rheumatic fever 2-4 weeks later.
43. Hypotension is defined in SBP > 20mm Hg or DBP > 10 after standing for 3min. compared with lying down.

Test yourself

- Definition of palpitations?
- Serum cholesterol > 10 is considered (high – normal – low – very high – very low)
- The commonest cause of syncope in young patients is
- BMI =
- In HTN if the patient is < 55 years 1st choice drug is
As R/ Or as R/
- Claudications are due to
- Ejection systolic murmur is heard in
- Definition of dyspnea?
- Serum cholesterol is elevated in
- Claudications usually occur in
- Major "revised Johns" criteria are
- Paroxysmal nocturnal dyspnea is episodes of breathlessness occurring at usually due to
- Revised John's criteria in diagnosis of rheumatic fever are
- In HTN if the patient is > 55years the first drug of choice is
..... As R/ Or As R/ And if 2nd drug is needed add
- Peak incidence of rheumatic fever is
- Mid-diastolic murmur is heard in
- Evidence of streptococcal infection
- Typically cardiac oedema is worse towards (the night – the evening – the day)
- Pansystolic murmur is heard in
- Raynaud's phenomenon is due to
- Mention the scientific name and dose of the following:

Tenormin	Apresolin
Epilat	Lanoxin
Alkapress	Zocor
Concor	Capoten
Lasix	Capozide
Aspocid	Aldactone
Isoptin	Co-diovan

Answers

1. The sensation of feeling one's own heart beat
2. Very high
3. Vaso-vagal faints
4. wt (kg)
Height² (m)
5. ACEIs – Capoten – ARB – Diovan 100
6. Peripheral ischemia
7. Tachycardia, pregnancy, aortic stenosis and sclerosis
8. Abnormal awareness of one's breathing
9. DM, Nephritic syndrome, Hypothyroidism, Pregnancy
10. The calf, thigh, buttocks, foot
11. Carditis
Arthritis
Subcutaneous nodules
Erythema marginatum
Sydenham's chorea
12. Night – pulmonary oedema
13. There must be:
Evidence of recent strept. infection
+ 2 major criteria or 1 major + 2 minor
14. CCBs – R/Alkapress (5,10) thiazides – R/
Natrili SR – ACEIs – R/Capoten 25,50
15. 5-15 ys
16. Mitral stenosis, rheumatic fever, aortic regurgitation
17. Recent strept. infection
Hx of scarlet fever
Positive throat swab
Increase in ASO titre > 200 U/ml
18. The evening
19. Mitral or tricuspid regurgitation or VSD
20. Vasospasm
21. Atenolol – 50,100mg
Nifedipine – 10mg
Amlodipine – 5,10mg
Bisoprolol – 2.5,5,10mg
Frusemide – 20, 40mg
Aspirin – 75mg
Verapamil – 80mg, 240mg (SR)
Hydralazine – 20mg
Digoxin – 0.25mg
Simvastatin – 40mg
Captopril – 25,50mg
Captopril 50mg + hydrochlorothiazide 25mg
Spironolactone – 25,100mg
Valsartan 160 + hydrochlorothiazide 25mg

تم فصل ال Cardiology والله تعالى الفضل والمنة